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Depression and Dementia: Exploring the Connection

Senior Project

In partial fulfillment of the requirements for

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By

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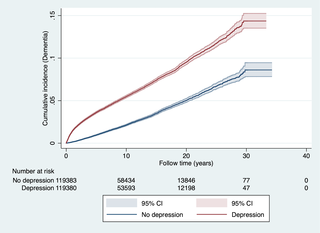
I would also like to give a special thanks to my grandmother. She was my inspiration behind this research project and without her love and support none of this would be possible. In addition, to my grandmother, I would like to thank my parents and sister for always believing in my abilities and pushing me to strive for excellence.

**Abstract**

Depression is a widespread illness that can increase the risk of several neurological conditions. There are many dementias, some with similarities but most being distinct. Dementia, the loss of memory and thinking ability. Depression and Dementia are two distinct conditions, but they can be related in several ways. Utilizing peer-reviewed information and research this presentation explores the complex and multifaceted connection between the two. The objective of this project is to combine current research and information about both depression and dementia and investigate the association between depression leading to cognitive impairment and eventually dementia.

**Methodology**

Two cohorts were formed from all individuals aged 50 years or older living in Sweden as of 31 December 2005. In the first cohort, individuals diagnosed with depression (n = 119,386) were matched with individuals without a depression diagnosis. The second cohort consisted of same-sex full sibling pairs with conflicting depression statuses. In the first cohort study, 5.5% of people diagnosed with depression had a dementia diagnosis, and the association with dementia was strongest in the first 6 months after depression diagnosis. In the sibling cohort, the association was stronger in the first 6 months after depression diagnosis.



This figure demonstrates the cumulative incidence of dementia after depression diagnosis in the 119,386 individuals with depression (red) and the individuals without depression (blue) during follow-up.

**Results**

Depression can be a risk factor for dementia. Research has shown that older adults who experience depression may be at a higher risk of developing dementia later in life. It is believed that the changes in brain chemistry that occur in depression may contribute to the development of dementia. Depression can also be a symptom of dementia, particularly in the early stages. People with dementia may experience a range of emotions, which can include sadness, hopelessness, and anxiety.

Depression and dementia share underlying biological mechanisms. Evidence suggests that the same biological mechanisms that underlie depression may also contribute to the development of dementia. For example, inflammation, oxidative stress, and changes in neurotransmitter systems have been implicated in both conditions.

Treating depression may help to prevent or slow the progression of dementia. There is some evidence to suggest that treating depression in older adults may help to reduce the risk of developing dementia or slow its progression. Treating depression can improve mood and cognition and may also help to reduce inflammation and oxidative stress.

**Conclusion**

Overall, the connection between depression and dementia is complex and multifaceted. There appears to be a probable connection between depression and its association with increased odds of dementia. While there are some clear links between the two conditions, more research is needed to fully understand the nature of this relationship and to develop effective prevention and treatment strategies.

References

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